

Appl. No. : 08/932,228
Filed : September 17, 1997

Ushiwata is not prior art

Ushiwata was published June 11, 1996. The present application, however, takes priority to Application No. 08/547,620, filed October 24, 1995 (now U.S. Patent No. 5,702,976, issued December 30, 1997). Accordingly, Applicants' effective filing date of October 24, 1995 precedes the publication of Ushiwata.

Because Ushiwata is not prior art to the present application, Applicants respectfully submit that the rejections are improper and therefore request the Examiner's reconsideration.

No suggestion to combine

Applicants further submit that the Examiner has not provided any suggestion from the prior art to perform the asserted combination.

Applicants have taught a process and resulting structure from depositing a silicon oxide with fluorine, thereby improving oxide flow and lowering dielectric constant.

Bose et al. taught a conventional silicon oxide for shallow trench isolation, along with a silicon nitride liner. *See* Abstract. Bose et al. did not express any suggestion or motivation to utilize a low dielectric constant material. In fact, Bose et al. specifically limited their invention to "undoped" dielectric or silicon oxide. *See* Bose et al. at independent Claims 1 and 10. Moreover, Bose et al. stressed the importance of using a silicon nitride liner 18. Col. 5, lines 41-47. As the skilled artisan will readily appreciate, the silicon nitride liner *increased* the overall trench isolation dielectric constant in the structure of Bose et al., relative to a pure silicon oxide element.

Ushiwata, in contrast taught isolation by LOCAL Oxidation of Silicon (LOCOS), whereby a silicon substrate is masked and oxidized through openings in the mask. In fact, the problem

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addressed by Ushiwata specifically stemmed from the formation of a bird's beak during LOCOS and the removal thereof. *See* Ushiwata at paragraphs [0003] to [0005]. The skilled artisan will readily appreciate that the bird's beak phenomenon is particular to LOCOS isolation. Ushiwata contained no teaching or suggestion to apply his low dielectric material to shallow trench isolation.

Because the art of record contained no suggestion to perform the asserted combination, Applicants respectfully request reconsideration of the rejections.

CONCLUSIONS

In view of the foregoing remarks, Applicants submit that the application is in condition for allowance and respectfully request the same.

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Respectfully submitted,
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